

BOOK 2

CALCULATOR WORKBOOK



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STARTING POINTS IN MATHEMATICS

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CALCULATOR WORKBOOK

BOOK 2

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Know Your Calculator

Turn your calculator on **ON**.

What does the display show? _____

Press **1** **2** **3**.

What does the display show now? _____

Press the clear key **C**.

What does the display show now? _____

Always press **C** to start a new exercise.

Press **9** several times. Keep pressing **9** until the display does not change.

How many 9's does the display show? _____

Print what the display shows. _____

This is the largest number your calculator can display.

Enter **C** **0** **+** **1** **=** **=** **=** **=** **=** **=** **=** **=**.

Print the numerals that were displayed.

You were counting with your calculator.

Continue counting to 50.

Now try counting by 2's.

Enter **C** **0** **+** **2** **=** **=** **=** **=** **=** **=** **=**.

Can you count by 5's? Try.

Show the keys to press.

Enter **C** **0** .

Always turn your calculator off when you are finished.

Program Your Calculator to Add and Subtract

Show the keys to press for each calculation. Above the keys print what the display shows at each key press. The first one is done for you.

1. $2 + 3$ 0. 2. 2. 3. 5. $\boxed{C} \boxed{2} \boxed{+} \boxed{3} \boxed{=} \underline{5}$

2. $6 - 5$ 0. 2. 2. 3. 5. $\boxed{C} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \underline{\quad}$

3. $8 + 7$ 0. 2. 2. 3. 5. $\boxed{C} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \underline{\quad}$

4. $9 - 4$ 0. 2. 2. 3. 5. $\boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \underline{\quad}$

Are you getting the results you expected?

C always brings the calculator back to 0.

+ and **-** do not show + and - in the display.

= tells the calculator to calculate. The result is displayed.

Show the keys to press for each calculation. Above the keys print what the display shows at each key press. The first one is done for you.

5. $23 + 19$ 0. 2. 23. 23. 1. 19. 42. $\boxed{C} \boxed{2} \boxed{3} \boxed{+} \boxed{1} \boxed{9} \boxed{=} \underline{42}$

23

19

6. $66 + 48$ 0. 2. 23. 23. 1. 19. 42. $\boxed{C} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \underline{\quad}$

7. $85 - 17$ 0. 2. 23. 23. 1. 19. 42. $\boxed{C} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \underline{\quad}$

8. $43 + 38$ 0. 2. 23. 23. 1. 19. 42. $\boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \underline{\quad}$

9. $74 - 59$ 0. 2. 23. 23. 1. 19. 42. $\boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \underline{\quad}$

10. $91 - 19$ 0. 2. 23. 23. 1. 19. 42. $\boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \boxed{\quad} \underline{\quad}$

Place Value

The numeral 4852 means 4 thousands 8 hundreds 5 tens 2 ones.

Press **C**. Enter the **value** of the marked digit in the first numeral. Press **+**. Then go on to the next numeral.
The first exercise is done for you.

1. 687 **C** 8 0 **+**

2139 2 0 0 **+**

4075 5 **+**

813 8 0 **+**

Result 2885

2. 972 **C**

1068

3457

6923

Result _____

3. 726 **C**

8049

1350

2600

Result _____

4. 975 **C**

3108

4211

7965

Result _____

5. 411 **C**

2678

6472

4914

Result _____

6. 1234 **C**

5678

9876

5432

Result _____

Now match each result with the numerals below.

4175 _____

2885 _____

1646 _____

7360 _____

5670 _____

1378 _____

If you cannot make a match, check that result.

Roman Numerals**Numerals for****1 to 9**

1 = I

2 = II

3 = III

4 = IV

5 = V

6 = VI

7 = VII

8 = VIII

9 = IX

When I precedes
V or X, 1 is
subtracted.**Numerals for
multiples of 10, to 90**

10 = X

20 = XX

30 = XXX

40 = XL

50 = L

60 = LX

70 = LXX

80 = LXXX

90 = XC

When X precedes
L or C, 10 is
subtracted.**Numerals for
multiples of 100, to 1000**

100 = C

200 = CC

300 = CCC

400 = CD

500 = D

600 = DC

700 = DCC

800 = DCCC

900 = CM

1000 = M

Express each Roman numeral in standard form by entering the expanded form in your calculator. The first exercise is done for you. The next two are started.

1. $\underbrace{C}_{300} \underbrace{C}_{0} \underbrace{C}_{0} \underbrace{X}_{40} \underbrace{L}_{0} \underbrace{V}_{0} \underbrace{I}_{8} \underbrace{I}_{0}$
 $300 + 40 + 8$

C 3 0 0 + 4 0 + 8 =

348

2. $\underbrace{M}_{1000} \underbrace{C}_{0} \underbrace{D}_{0} \underbrace{L}_{0} \underbrace{X}_{0} \underbrace{X}_{0} \underbrace{I}_{0} \underbrace{V}_{0}$
 $1000 + 400 + \underline{\quad} + \underline{\quad}$

C

3. $\underbrace{M}_{0} \underbrace{C}_{0} \underbrace{M}_{0} \underbrace{L}_{0} \underbrace{X}_{0} \underbrace{I}_{0} \underbrace{X}_{0}$
 $\underline{\quad} + \underline{\quad} + \underline{\quad} + \underline{\quad}$

C

4. M M D C C X L V I

5. M M M C D L V I I I

6. M C M L X X X I I I

7. M M D C C C X L V I I

Word Names

Express each number in standard form. Then calculate the sum of the number. The first exercise is done for you.

1. three hundred fifteen

315

four thousand two hundred eleven

4211

nine thousand twenty-six

9026

sum

13552

2. one thousand nine hundred

eighty-three

six hundred ninety-seven

five thousand four hundred

sum

3. seven thousand two hundred ten

eight thousand seventy-four

nine hundred fifty

sum

4. seven hundred five

six thousand nine

four thousand twenty-six

sum

5. six hundred twenty-five

eight thousand three hundred nine

four hundred one

sum

6. seven thousand sixteen

one thousand two hundred thirty-four

nine hundred sixty-six

sum

7. nine hundred twenty-seven

two thousand six hundred twelve

eight hundred fourteen

sum

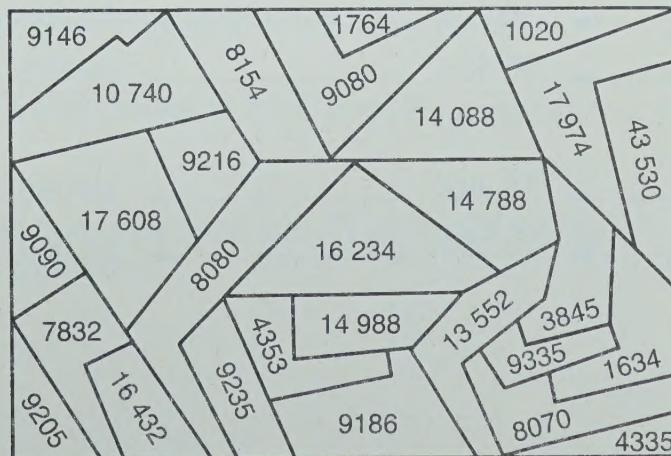
8. five thousand seven hundred fifty

eight thousand four hundred

six hundred thirty-eight

sum

Color the shapes that have the same numbers as your sums.



Place-Value Quiz

Enter the first number. Use $+$ or $-$ to change the display to the next number. The first exercise is done for you.

1. $23\ 456 - 3000 \rightarrow 20\ 456 - 50 \rightarrow 20\ 406 + 7000 \rightarrow$
 $27\ 406 - 20000 \rightarrow 7\ 406 + 60 \rightarrow 7\ 466$

2. $85\ 324 \rightarrow 85\ 724 \rightarrow 80\ 724 \rightarrow$
 $80\ 794 \rightarrow 50\ 794 \rightarrow 52\ 794$

3. $97\ 680 \rightarrow 97\ 480 \rightarrow 90\ 480 \rightarrow$
 $90\ 080 \rightarrow 90\ 000 \rightarrow 0$

4. $15\ 693 \rightarrow 25\ 693 \rightarrow 25\ 993 \rightarrow$
 $21\ 993 \rightarrow 21\ 913 \rightarrow 28\ 913$

5. $10\ 305 \rightarrow 10\ 805 \rightarrow 15\ 805 \rightarrow$
 $15\ 875 \rightarrow 75\ 875 \rightarrow 15\ 975$

6. $63\ 841 \rightarrow 68\ 841 \rightarrow 28\ 841 \rightarrow$
 $28\ 241 \rightarrow 28\ 291 \rightarrow 68\ 291$

7. $18\ 479 \rightarrow 18\ 439 \rightarrow 13\ 439 \rightarrow$
 $33\ 439 \rightarrow 33\ 433 \rightarrow 33\ 333$

8. $68\ 492 \rightarrow 18\ 492 \rightarrow 18\ 092 \rightarrow$
 $10\ 092 \rightarrow 10\ 090 \rightarrow 10\ 000$

Know Your Numbers

17 643

3769

2935

5013

793

2854

6321

9875

3160

2785

1. C Add the numbers that have 7 in the hundreds place. _____
2. C Subtract the least number from the greatest. _____
3. C Add the numbers between 2000 and 5000. _____
4. C Add the numbers that have 3 in the ones place. _____
5. C Subtract the number closest to 5000 from the number closest to 18 000. _____
6. C Add the numbers between 3000 and 10 000. _____
7. C Subtract the number closest to 800 from the number closest to 3000. _____
8. C Subtract the greatest number in the second row from the greatest number in the first row. _____
9. C Add the even numbers. _____
10. C Add the number closest to 6000 to the least number. _____
11. C Subtract the number closest to 3000 from the greatest number. _____
12. C Use your results from exercises 1 to 11. Subtract the least result from the greatest. _____

Program Your Calculator to Multiply

Show the keys to press for each calculation. Above the keys print what the calculator shows at each key press. The first exercise is done for you.

1. 3×6 0. 3. 3. 6. 18. 18

2. 7×8 _____

3. 4×9 _____

4. 5×7 _____

Are you getting
the results you
expected?

Show the keys to press for each calculation. Above the keys print what the calculator shows at each key press.

5. 48×7 _____

6. 96×5 _____

7. 55×3 _____

8. 72×5 _____

9. 24×6 _____

10. 20×7 _____

11. 36×3 _____

12. 689×7 _____

13. 215×9 _____

14. 114×6 _____

15. 242×7 _____

Concert Math

This table shows the attendance at a school concert.

Day	Children under 12	Students 12 to 18	Adults	Senior Citizens
Wednesday	15	12	24	12
Thursday	26	17	29	29
Friday	35	18	34	18

1. How many children under 12 saw the concert?

2. Student tickets cost \$2. How much money was made on Friday from student tickets?

3. How many more senior citizens attended on Thursday than on Wednesday?

4. How many people attended the concert on Friday?

5. Adult tickets cost \$3. How much money was made on Thursday from adult tickets?

6. How many senior citizens saw the concert?

7. Senior citizen tickets cost \$2. How much money was made from senior citizen tickets?

8. How many people saw the concert on Thursday?

9. How many more adults attended on Friday than on Wednesday?

10. How many people saw the concert on Wednesday?

11. How many people attended the concert?

12. Which day had the greatest number of people?

Program Your Calculator to Divide

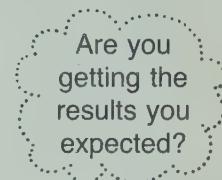
Show the keys to press for each calculation. Above the keys print what the calculator shows at each key press. The first one is done for you.

1. $35 \div 5$ 0. 3. 35. 35. 5. 7. 7
 7

2. $7 \overline{)56}$ _____

3. $63 \div 9$ _____

4. $3 \overline{)18}$ _____



Show the keys to press for each calculation. Above the keys print what the display shows at each key press. Then show a related multiplication fact. The first one is done for you.

5. $4 \overline{)28}$ 0. 2. 28. 28. 4. 7. 7 $7 \times 4 = 28$
 7 $7 \times 4 = 28$

6. $6 \overline{)54}$ _____

7. $40 \div 8$ _____

8. $72 \div 9$ _____

9. $24 \div 6$ _____

10. $5 \overline{)25}$ _____

11. $450 \div 9$ _____

12. $4 \overline{)160}$ _____

13. $8 \overline{)240}$ _____

14. $5 \overline{)300}$ _____

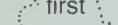
15. $3 \overline{)120}$ _____

Summing Numbers

Find the sum of the whole numbers from 1 to 20.
Did you get 210?

It would take a long time to find the sum of the numbers from 1 to 100.

There is a short cut. We will try it on the sum of 1 to 20. We know the result should be 210.


$$\begin{array}{r} 1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 + 11 + 12 + 13 + 14 + 15 + 16 + 17 + 18 + 19 + 20 \\ + 20 + 19 + 18 + 17 + 16 + 15 + 14 + 13 + 12 + 11 + 10 + 9 + 8 + 7 + 6 + 5 + 4 + 3 + 2 + 1 \\ \hline 21 + 21 = 420 \end{array}$$


Since each number was used twice, divide the sum 420 by 2.
 $420 \div 2 = 210$

Here is the short cut method for your calculator.

$$\boxed{C} \quad \underbrace{\boxed{1} \quad \boxed{+} \quad \boxed{2} \quad \boxed{0} \quad \boxed{=}}_{\text{100}} \quad \underbrace{\boxed{\times} \quad \boxed{2} \quad \boxed{0} \quad \boxed{=}}_{\text{200}} \quad \underbrace{\boxed{\div} \quad \boxed{2} \quad \boxed{=}}_{\text{10}} \quad \underline{\quad 210 \quad}$$

Add the **first** number
and the **last** number.

Multiply the sum by **how many** numbers.  Divide this product by 2.

Show the keys to press to find each sum. Follow the example above.

1. The sum of 1 to 18

2. The sum $1 + 2 + 3 + \dots + 29 + 30$.

3. The sum of 1 to 100.

4. The sum $1 + 2 + 3 + \dots + 999 + 1000$.

A horizontal row of 15 empty square boxes, each with a thin black border, intended for children to draw or color in.

5. The sum of 40 to 80.

Counting Decimal Tenths and Hundredths

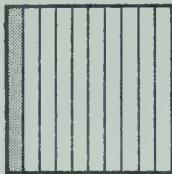
1 whole

1.0



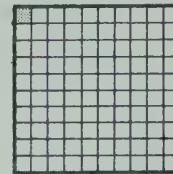
1 tenth

0.1



1 hundredth

0.01



To count by 0.1's press:

C **0** **+** **.** **1** **=** **=** **=** **=** **=** **=** **=**.

Count from 0 to 2.5.

Print the numerals shown.

Now count from 7.4 to 10.0.

To count by 0.01's press:

C **0** **+** **.** **0** **1** **=** **=** **=** **=** **=** **=**.

Count from 0 to 0.35.

Print the numerals shown.

Now count from 8.03 to 8.99.

Program Your Calculator for Decimal Work

Show the keys to press for each calculation. Above the keys print what the display shows at each key press. The first exercise is done for you.

1. $0.82 - 0.59$

0. 0. 0. 0.8 0.82 0.82 0. 0. 0.5 0.59 0.23
 C 0 · 8 2 - 0 · 5 9 = 0.23

2. $4.7 + 9.8$

3. 6.9×7

4. $11.8 + 7.4$

5. 24.1×6

6. $9.08 - 7.5$

7. 0.92×5

8. $1.5 + 6.3 + 0.9$

Decimals and Money

penny
1¢
\$0.01nickel
5¢
\$0.05dime
10¢
\$0.10quarter
25¢
\$0.25dollar bill
100¢
\$1.00

Complete each chart. Then find the total value.

The first exercise is started.

1.



	number of	value of	value of all <input checked="" type="checkbox"/>
dollar bill			
quarter	3	\$0.25	\$0.75
dime	4	\$0.10	
nickel			
penny	5		

total value

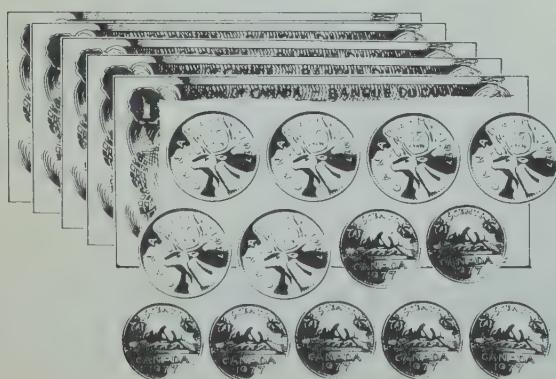
2.



	number of	value of	value of all <input checked="" type="checkbox"/>
dollar bill			
quarter			
dime			
nickel			
penny			

total value

3.



	number of	value of	value of all <input checked="" type="checkbox"/>
dollar bill			
quarter			
dime			
nickel			
penny			

total value

Know Your Decimals

1.5

6.99

7.1

3.28

0.64

7.25

0.1

9.05

1. C Add the decimals that are to the tenths place. _____
2. C Add the decimals that are less than 1. _____
3. C Subtract the least number from the greatest. _____
4. C Add the decimals between 1 and 7. _____
5. C Multiply the decimal closest to 2 by 5. _____
6. C Add the decimal closest to 9 and the decimal closest to 1. _____
7. C Multiply the decimal closest to 7 by 3. _____
8. C Add the decimals that are to the hundredths place. _____
9. C Add the decimals that have 5 in the hundredths place. _____
10. C Add the decimals that have 1 in the tenths place. _____
11. C Subtract the greatest number in the top row from the greatest number in the bottom row. _____
12. C Multiply the decimal closest to 1 by 4. _____

Patterns

Calculate only as many products as you need to, to find each pattern. Complete each pattern without your calculator. Then check.

1. $1 \times 101 =$ _____

$11 \times 101 =$ _____

$111 \times 101 =$ _____

$1\ 111 \times 101 =$ _____

$11\ 111 \times 101 =$ _____

$111\ 111 \times 101 =$ _____

$3 \times 101 =$ _____

$33 \times 101 =$ _____

$333 \times 101 =$ _____

$3\ 333 \times 101 =$ _____

$33\ 333 \times 101 =$ _____

$333\ 333 \times 101 =$ _____

2. $1 \times 1 =$ _____

$11 \times 11 =$ _____

$111 \times 111 =$ _____

$1111 \times 1111 =$ _____

4. $3 \times 37 =$ _____

$6 \times 37 =$ _____

$9 \times 37 =$ _____

$12 \times 37 =$ _____

$15 \times 37 =$ _____

$18 \times 37 =$ _____

$21 \times 37 =$ _____

$24 \times 37 =$ _____

$27 \times 37 =$ _____

$2 \times 101 =$ _____

$22 \times 101 =$ _____

$222 \times 101 =$ _____

$2\ 222 \times 101 =$ _____

$22\ 222 \times 101 =$ _____

$222\ 222 \times 101 =$ _____

$4 \times 101 =$ _____

$44 \times 101 =$ _____

$444 \times 101 =$ _____

$4\ 444 \times 101 =$ _____

$44\ 444 \times 101 =$ _____

$444\ 444 \times 101 =$ _____

3. $9 \times 9 =$ _____

$99 \times 99 =$ _____

$999 \times 999 =$ _____

$9999 \times 9999 =$ _____

5. $4 \times 4 =$ _____

$44 \times 4 =$ _____

$444 \times 4 =$ _____

$4444 \times 4 =$ _____

$6 \times 6 =$ _____

$66 \times 6 =$ _____

$666 \times 6 =$ _____

$6666 \times 6 =$ _____

Remainders

Recall
$$4 \overline{)27} \quad \text{R3}$$

$$\underline{24} \quad \underline{3}$$

6 remainder 3
 when dividing by 4
 means $6\frac{3}{4}$.

Try 2 7 ÷ 4 = _____.

6.75 means 6 and $\frac{75}{100}$

or $6\frac{3}{4}$.

Divide. Each result will have a remainder expressed as a decimal.

1. $97 \div 2 =$ _____

2. $8 \overline{)514}$

3. $785 \div 10 =$ _____

4. $499 \div 4 =$ _____

5. $149 \div 5 =$ _____

6. $3 \overline{)245}$

7. $764 \div 5 =$ _____

8. $2 \overline{)803}$

9. $4 \overline{)775}$

10. $8 \overline{)625}$

11. $519 \div 5 =$ _____

12. $3 \overline{)622}$

13. $712 \div 10 =$ _____

14. $857 \div 2 =$ _____

15. $5 \overline{)222}$

16. $618 \div 8 =$ _____

17. $549 \div 4 =$ _____

18. $8 \overline{)329}$

Sharing Equally

Marilyn has 90¢ to share with her 3 sisters. How much money will each receive?



$$\boxed{C} \ \boxed{9} \ \boxed{0} \ \boxed{\div} \ \boxed{4} \ \boxed{=} \ \underline{22.5}$$

You cannot give part of a cent.
Each girl will receive 22¢.
There will be money left.

Carlo has 36 h (hours) to spend on 5 equally important jobs. How much time can he spend on each?

$$\boxed{C} \ \boxed{3} \ \boxed{6} \ \boxed{\div} \ \boxed{5} \ \boxed{=} \ \underline{7.2}$$

You can use part of an hour.
Carlo can spend 7.2 h on each job.

23 people are going on a trip. If a car seats 4 people, how many cars are needed?

$$\boxed{C} \ \boxed{2} \ \boxed{3} \ \boxed{\div} \ \boxed{4} \ \boxed{=} \ \underline{5.75}$$

You cannot use part of a car.
6 cars are needed.
1 car will have fewer people.

Decide what to do with the remainder to give the best answer.

1. A box of 100 stamps is to be shared equally among 8 friends. How many stamps will each receive?

2. Lance has 90 min to solve 4 equally difficult problems. How long should he spend on each?

3. Enza has 356 pamphlets to put in boxes. She puts 10 in each box. How many boxes does she need?

4. Milo has 118 hockey cards to share with 4 friends. How many cards will each receive?

5. 214 students are to sit in rows. One row seats 8. How many rows are needed for the students?

6. A pie rack holds 5 pies. How many pie racks are needed for 96 pies?

Ciphering

In a cipher a symbol stands for a letter.

A 51	B 52	C 53	D 54	E 55	F 56	G 57	H 58	I 59
J 60	K 61	L 62	M 63	N 64	O 65	P 66	Q 67	R 68
S 69	T 70	U 71	V 72	W 73	X 74	Y 75	Z 76	space 77

To **encipher** a message is to put it into symbols.

To **decipher** a message is to figure it out.

Encipher: CAT becomes 53 51 70.

Decipher: 54 65 57 becomes DOG.

Often you must calculate to decipher.

$$13 + 8 + 27 + 4$$

$$13 \times 5$$

$$90 - 6 - 13 - 6$$

$$25 + 19 + 17$$

$$\begin{matrix} 52 \\ \mathbf{B} \end{matrix}$$

$$\begin{matrix} 65 \\ \mathbf{O} \end{matrix}$$

$$\begin{matrix} 65 \\ \mathbf{O} \end{matrix}$$

$$\begin{matrix} 61 \\ \mathbf{K} \end{matrix}$$

Decipher this message.

$$9 + 24 + 20 \quad 15 + 14 + 22 \quad 93 - 18 - 13 \quad 212 \div 4 \quad 42 + 17 + 12 \quad 496 \div 8 \quad 12 + 25 + 14$$

$$\begin{matrix} \underline{\quad} & \underline{\quad} & \underline{\quad} & \underline{\quad} & \underline{\quad} & \underline{\quad} & \underline{\quad} \end{math>$$

$$7 \times 5 \times 2 \quad 90 - 11 - 14 \quad 2 \times 17 \times 2 \quad 276 \div 4 \quad 100 - 8 - 7 - 8 \quad 29 \times 2 \quad 255 \div 5$$

$$\begin{matrix} \underline{\quad} & \underline{\quad} & \underline{\quad} & \underline{\quad} & \underline{\quad} & \underline{\quad} & \underline{\quad} \end{math>$$

$$6 \times 3 \times 4 \quad 85 - 13 - 17 \quad 41 + 10 + 26 \quad 488 \div 8 \quad 14 + 28 + 13 \quad 5 \times 3 \times 5 \quad 95 - 11 - 15$$

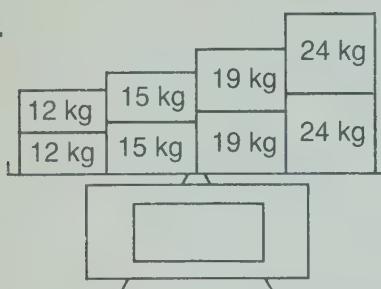
$$\begin{matrix} \underline{\quad} & \underline{\quad} & \underline{\quad} & \underline{\quad} & \underline{\quad} & \underline{\quad} & \underline{\quad} \end{math>$$

Make up a message. Encipher it.
Give it to a friend to decipher.

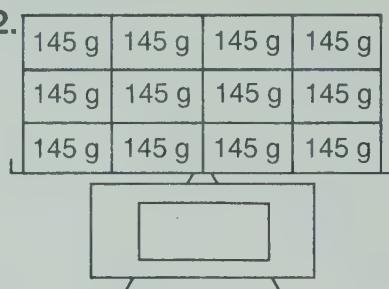
Mass

Calculate the total mass on each scale.

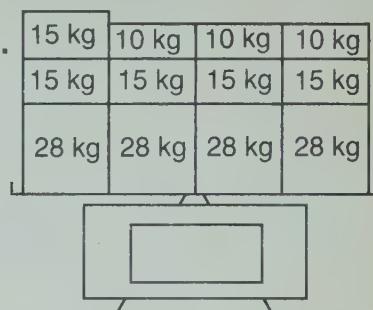
1.



2.

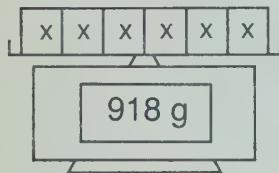


3.

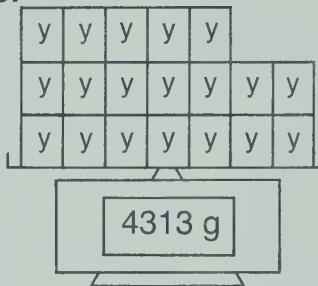


Calculate the mass of one box.

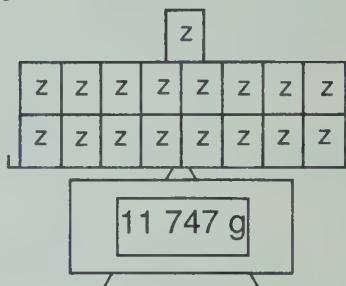
4.



5.

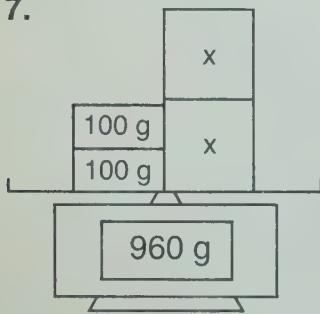


6.

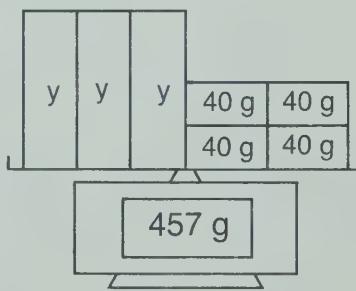


Calculate the mass of one unmeasured box.

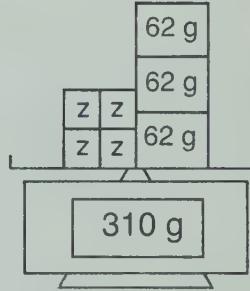
7.



8.



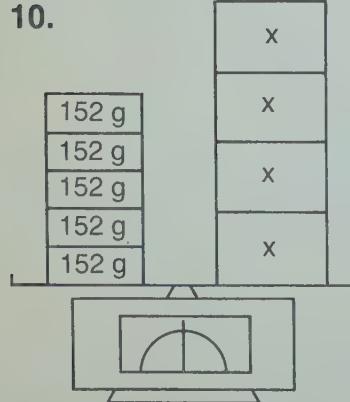
9.



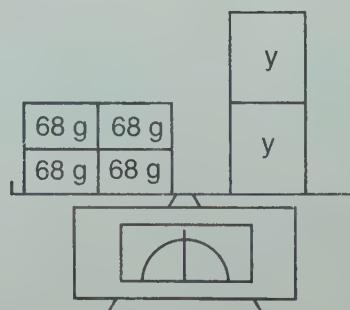
The scales are balanced.

Calculate the mass of one unmeasured box.

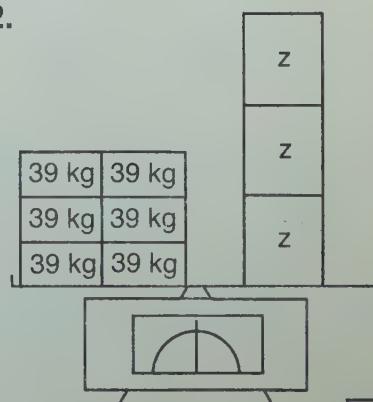
10.



11.



12.



Rounding

Consider the rounding of each number. If the number will be rounded up, put a check (✓) beside it. Add the numbers to be rounded up. If the sum is 100 000, you have correctly identified the numbers to be rounded up. Then round each number. The first exercise is done for you.

1. Round to the nearest hundred.

45 761	✓	45 800
38 624		38 600
27 539		27 500
28 185	✓	28 200
26 054	✓	26 100

$$45 761 + 28 185 + 26 054 = 100 000$$

3. Round to the nearest thousand.

19 426	
15 837	
49 625	
58 496	
34 538	

5. Round to the nearest hundred.

64 162	
48 629	
33 333	
12 079	
23 759	

7. Round to the nearest ten thousand.

18 425	
35 260	
46 315	
32 946	
21 540	

2. Round to the nearest ten.

8 429	
67 355	
14 273	
16 309	
7 907	

4. Round to the nearest ten thousand.

71 685	
55 374	
36 192	
8 434	
24 978	

6. Round to the nearest thousand.

8 266	
23 628	
75 496	
19 785	
56 587	

8. Round to the nearest ten.

2 953	
87 135	
7 684	
14 511	
12 865	

Know Your Numbers

61 875	38 144	26 128	42 914	16 011
25 987	59 325	43 966	37 892	48 379

1. C Add the numbers greater than 40 000. _____
2. C Subtract the number closest to 25 000 from the number closest to 60 000. _____
3. C Add the numbers that have 6 in the thousands place. _____
4. C Subtract the greatest number in the second row from the greatest number in the first row. _____
5. C Add the greatest number and the number closest to 42 000. _____
6. C Subtract the least number from the greatest. _____
7. C Add the numbers that when rounded to the nearest hundred have 9 in the hundreds place. _____
8. C Add the numbers that have 4 in the ten thousands place. _____
9. C Subtract the number closest to 26 000 from the number closest to 38 000. _____
10. C Add the numbers between 20 000 and 45 000. _____
11. C Multiply the number closest to 49 000 by 12. _____
12. C Divide the number closest to 16 000 by 9. _____

Egyptian Numerals

The ancient Egyptians had no zero and no place value.

1	2	3	4	5	6
7	8	9	10	100	1000
			0	9	9
					0

Express each Egyptian numeral in standard form by entering the expanded form in your calculator. The first exercise is done for you.

1. 

10000 + 2000 + 500 + 20 + 3

12523

3. ରରର ଶ୍ରେଷ୍ଠ ୨୨ ନୂର ॥

4. ၁၂ ၁၁၁၁ ၁၁၁၁ ၁၁၁၁ ၁၁၁၁ ၁၁၁၁ ၁၁၁၁ ၁၁၁၁ ၁၁၁၁ ၁၁၁၁ ၁၁၁၁ ၁၁၁၁

Estimating Sums and Differences

When adding or subtracting with your calculator, it is important to know if your results are reasonable.

You can estimate to find out if your results are reasonable.

Estimate each result. The first exercise is done for you.

1. Round to the nearest hundred.

$$\begin{array}{r} 300 \\ 323 \\ + \quad 200 \\ + \quad 189 \\ \hline \end{array} + \begin{array}{r} 500 \\ 476 \\ + \quad 1000 \\ + \quad 1000 \\ \hline \end{array} = \underline{\quad \quad \quad}$$

2. Round to the nearest ten.

$$\begin{array}{r} \underline{\quad} \\ 31 \\ + \quad 72 \\ + \quad 69 \\ + \quad 78 \\ \hline \end{array} + \underline{\quad \quad \quad} = \underline{\quad \quad \quad}$$

3. Round to the nearest hundred.

$$\begin{array}{r} \underline{\quad \quad \quad} \\ 5097 \\ + \quad 606 \\ + \quad 34 \\ + \quad 467 \\ + \quad 764 \\ \hline \end{array} + \underline{\quad \quad \quad} = \underline{\quad \quad \quad}$$

4. Round to the nearest ten.

$$\begin{array}{r} \underline{\quad} \\ 97 \\ - \quad 36 \\ \hline \end{array} = \underline{\quad \quad \quad}$$

5. Round to the nearest hundred.

$$\begin{array}{r} \underline{\quad \quad \quad} \\ 675 \\ - \quad 112 \\ \hline \end{array} = \underline{\quad \quad \quad}$$

6. Round to the nearest thousand.

$$\begin{array}{r} \underline{\quad \quad \quad} \\ 7186 \\ + \quad 2493 \\ + \quad 3604 \\ \hline \end{array} + \underline{\quad \quad \quad} = \underline{\quad \quad \quad}$$

7. Round to the nearest thousand.

$$\begin{array}{r} \underline{\quad \quad \quad} \\ 9136 \\ - \quad 4287 \\ \hline \end{array} = \underline{\quad \quad \quad}$$

8. Round to the nearest hundred.

$$\begin{array}{r} \underline{\quad \quad \quad} \\ 1487 \\ + \quad 925 \\ + \quad 855 \\ + \quad 392 \\ \hline \end{array} + \underline{\quad \quad \quad} = \underline{\quad \quad \quad}$$

Now use your calculator to find each sum or difference. Are the results close to your estimates?

Addition and Subtraction Constants

Enter each program. Above each $=$ print what the display shows. Explain what your calculator is doing.

15.

1. $\boxed{C} \ \boxed{8} \ \boxed{+} \ \boxed{7} \ \boxed{=} \ \boxed{9} \ \boxed{=} \ \boxed{5} \ \boxed{=} \ \boxed{7} \ \boxed{=} \ \boxed{1} \ \boxed{2} \ \boxed{=}$

2. $\boxed{C} \ \boxed{6} \ \boxed{+} \ \boxed{9} \ \boxed{=} \ \boxed{2} \ \boxed{=} \ \boxed{4} \ \boxed{=} \ \boxed{5} \ \boxed{=} \ \boxed{1} \ \boxed{4} \ \boxed{=}$

3. $\boxed{C} \ \boxed{8} \ \boxed{-} \ \boxed{2} \ \boxed{=} \ \boxed{9} \ \boxed{=} \ \boxed{4} \ \boxed{=} \ \boxed{3} \ \boxed{=} \ \boxed{1} \ \boxed{5} \ \boxed{=}$

4. $\boxed{C} \ \boxed{1} \ \boxed{4} \ \boxed{-} \ \boxed{5} \ \boxed{=} \ \boxed{9} \ \boxed{=} \ \boxed{2} \ \boxed{0} \ \boxed{=} \ \boxed{2} \ \boxed{7} \ \boxed{=}$

Complete each table. Use the addition or subtraction constant.

5. $+ 285$

169	454
326	
492	
547	

6. $+ 366$

293	
476	
591	
872	

7. $+ 905$

462	
380	
791	
254	

8. $- 136$

225	
394	
876	
925	

9. $- 428$

500	
621	
782	
848	

10. $- 567$

666	
741	
825	
937	

Estimating Products

When multiplying with your calculator, it is important to know if your results are reasonable.

You can estimate to find out if your results are reasonable.

Round each factor to a number that is easy to multiply mentally.
For example, 938 rounds to 900, 68 rounds to 70, 114 rounds to 100, 1384 rounds to 1000.

Estimate each result. The first exercise is done for you.

$$1. \begin{array}{r} 385 \\ \times 73 \\ \hline 400 \\ \times 80 \\ \hline 32000 \end{array}$$



$$2. \begin{array}{r} 863 \\ \times 49 \\ \hline \end{array}$$

$$3. \begin{array}{r} 218 \\ \times 37 \\ \hline \end{array}$$

$$4. \begin{array}{r} 58 \\ \times 23 \\ \hline \end{array}$$

$$5. \begin{array}{r} 6407 \\ \times 186 \\ \hline \end{array}$$

$$6. \begin{array}{r} 5234 \\ \times 89 \\ \hline \end{array}$$

$$7. \begin{array}{r} 842 \\ \times 24 \\ \hline \end{array}$$

$$8. \begin{array}{r} 665 \\ \times 18 \\ \hline \end{array}$$

$$9. \begin{array}{r} 769 \\ \times 115 \\ \hline \end{array}$$

$$10. \begin{array}{r} 249 \\ \times 385 \\ \hline \end{array}$$

$$11. \begin{array}{r} 1425 \\ \times 614 \\ \hline \end{array}$$

$$12. \begin{array}{r} 2619 \\ \times 342 \\ \hline \end{array}$$

Now use your calculator to find each product.

Are your results close to your estimates?

Multiplication Constant

Enter each program. Above each $=$ print what the display shows. Explain what your calculator is doing.

15.

1. [C] [5] [\times] [3] [=] [9] [=] [6] [=] [4] [=] [8] [=]

2. [C] [1] [2] [\times] [4] [=] [6] [=] [9] [=] [3] [=] [7] [=]

Complete each table. Use the multiplication constant.

3. $\times 28$

26	
84	
19	
37	

4. $\times 45$

13	
46	
93	
112	

5. $\times 32$

176	
283	
461	
775	

6. $\times 105$

23	
34	
58	
67	

7. $\times 63$

72	
88	
94	
107	

8. $\times 14$

85	
170	
232	
647	

Helen bought 15 of each of the following items.
How much did she spend on each item?

9. caps at \$6 _____

10. shirts at \$9 _____

11. shorts at \$8 _____

12. pairs of socks at \$3 _____

13. pairs of shoes at \$16 _____

Airplane Math

Model	Cruising Speed in kilometres per hour	Passengers
Boeing 727	885	144
Boeing 747	965	365
Douglas DC8	885	210
Douglas DC9	870	102
Lockheed 1011	965	257

1. How many more passengers does a Boeing 747 fly than a Lockheed 1011?

2. How far does a DC9 fly in 5 h?

3. How many passengers do 46 DC9's fly?

4. How many passengers do one Boeing 727 and one Lockheed 1011 fly?

5. How much faster does a Boeing 747 fly than a Boeing 727?

6. Which planes fly 3540 km in 4 h?

7. How many more passengers does a Lockheed 1011 fly than a Boeing 727?

8. How many passengers do 58 Boeing 727's fly?

Arrangements of Digits

The solutions to many problems in fields such as biology, economics, and physics depend upon rearranging digits.

Rearrange the digits in each numeral to make all the possible numerals. Then calculate the sum. The first exercise is started.

2. 427

3. 395

4. 642

5. 783

6. 4961

(Do this one
on a separate
sheet of paper.)

Now match each sum with a numeral below.

3774

3996

2664

2886

133 320

1998 _____

If you cannot make a match, check that rearrangement.

123 has _____ possible arrangements.

1234 has _____ possible arrangements.

How many arrangements are possible using 123 456 789? _____

Decimal Tents, Hundredths, Thousandths

Use only the **1**, **0**, **+**, **.**, and **=** keys to enter each number.
Then show the expanded form. The first exercise is done for you.

1. 2.634

Display

C **0** **+** **1** **=** **=**

2.

+ **.** **1** **=** **=** **=** **=** **=** **=**

2.6

+ **.** **0** **1** **=** **=** **=**

2.63

+ **.** **0** **0** **1** **=** **=** **=** **=**

2.634

2 ones + 6 tenths + 3 hundredths + 4 thousandths

2. 14.9

3. 7.25

4. 23.81

5. 7.936

6. 25.125

7. 101.1

8. 54.23

9. 0.714

10. 2.09

11. 4.007

12. 16.5

Track and Field Math

Circle the greatest and the least result for each event.
Then subtract the least from the greatest in each event.

Standing Long Jump

1.22 m
1.58 m
1.45 m
1.66 m
1.61 m
1.32 m

_____ M

Running Long Jump

3.46 m
3.38 m
3.34 m
3.49 m
3.57 m
3.42 m

_____ S

**High Jump**

1.27 m
1.21 m
1.16 m
1.28 m
1.24 m
1.11 m

_____ D

Shot Put

4.34 m
4.37 m
4.26 m
4.30 m
4.35 m
4.24 m

_____ L

50 m Race

10.25 s
8.64 s
9.78 s
8.91 s
10.54 s
9.87 s

_____ E

100 m Race

15.31 s
14.64 s
13.48 s
13.95 s
12.98 s
15.09 s

_____ A

200 m Race

35.78 s
34.80 s
33.42 s
33.48 s
38.00 s
32.08 s

_____ I

800 m Race

5.12 min
4.05 min
3.93 min
4.87 min
3.69 min
4.78 min

_____ C

Print the letter below its number.

0.17	1.9	1.43	5.92	0.44	2.33	0.13	0.23

What did you spell? _____

Rounding Decimals

Consider the rounding of each number. If the number will be rounded down, put a check (/) beside it. Add the numbers to be rounded down. If the sum is 20, you have correctly identified the numbers to be rounded down. Then round each number. The first exercise is done for you.

1. Round to the nearest tenth.

0.462	_____	0.5
9.83	✓	9.8
7.445	✓	7.4
4.15	_____	4.2
2.725	✓	2.7

$$9.83 + 7.445 + 2.725 = 20$$

3. Round to the nearest hundredth.

5.783	_____
14.266	_____
12.194	_____
8.117	_____
2.023	_____

5. Round to the nearest one.

7.29	_____
2.46	_____
13.64	_____
9.9	_____
10.25	_____

7. Round to the nearest hundredth.

5.959	_____
3.434	_____
7.272	_____
8.688	_____
9.294	_____

2. Round to the nearest one.

12.39	_____
4.821	_____
6.42	_____
1.19	_____
13.82	_____

4. Round to the nearest tenth.

13.95	_____
8.695	_____
11.347	_____
2.913	_____
5.74	_____

6. Round to the nearest tenth.

18.195	_____
0.74	_____
0.934	_____
0.87	_____
18.326	_____

8. Round to the nearest one.

14.257	_____
3.33	_____
14.972	_____
2.413	_____
14.693	_____

Swimming Math**Time to Swim 50 m**

	Butterfly	Backstroke	Breaststroke	Freestyle
Fiona	28.79 s	31.46 s	36.85 s	31.90 s
Chu	29.55 s	31.27 s	35.48 s	32.88 s
Inga	28.35 s	32.17 s	36.43 s	31.94 s
Ted	31.22 s	32.80 s	33.49 s	31.65 s

1. Fiona swam 50 m of each stroke. How long did it take?

2. How much faster is Inga than Ted at swimming 50 m of butterfly?

3. How much faster is Chu at the backstroke than the breaststroke?

4. Ted swam 50 m of each stroke. How long did it take?

5. How much faster is Ted than Chu at swimming 50 m of freestyle?

6. How much faster is Inga's fastest stroke than her slowest stroke?

7. Chu swam 50 m of each stroke. How long did it take?

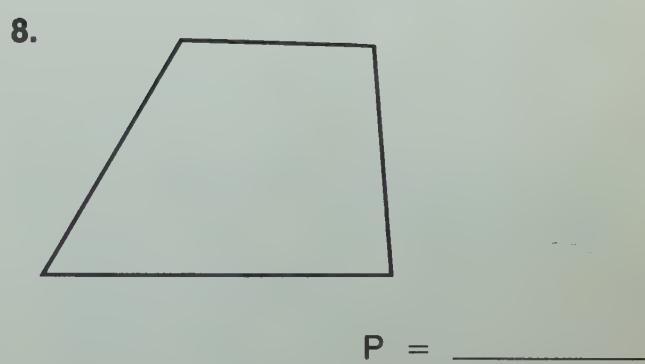
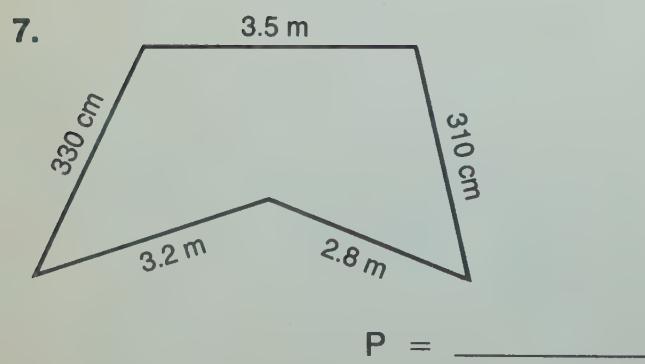
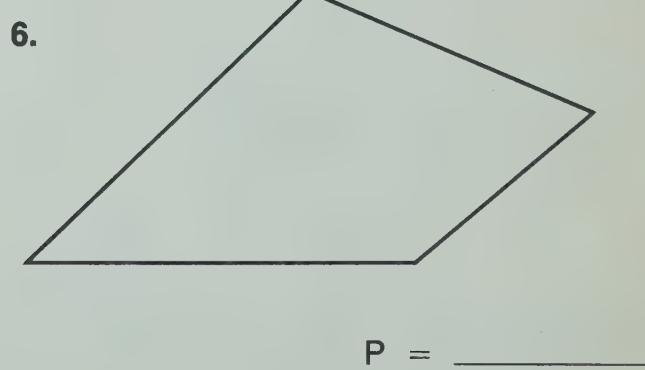
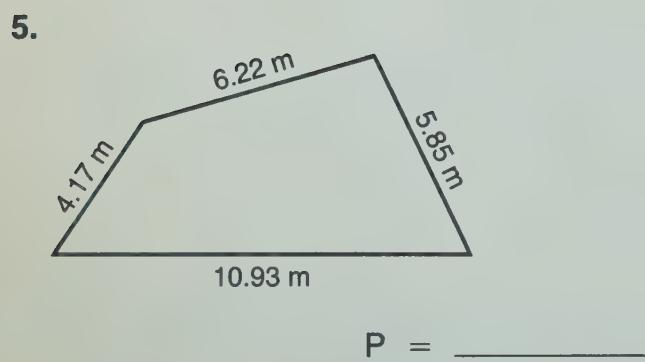
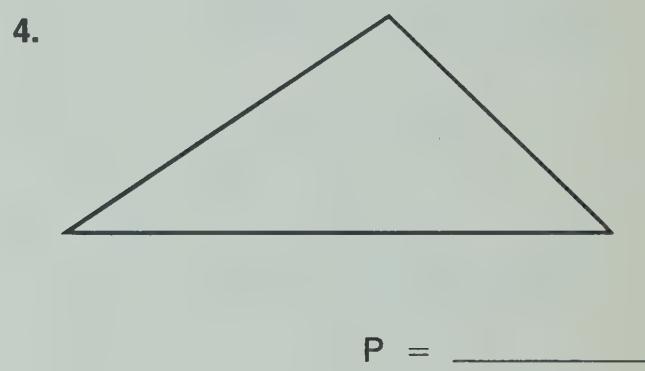
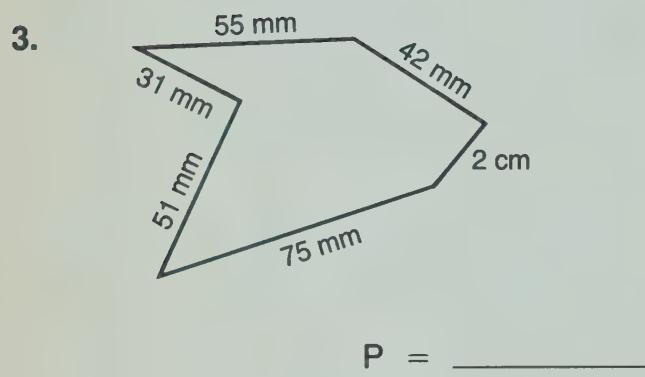
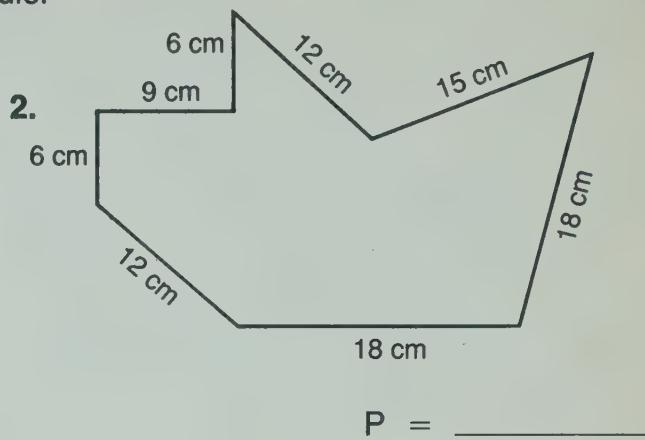
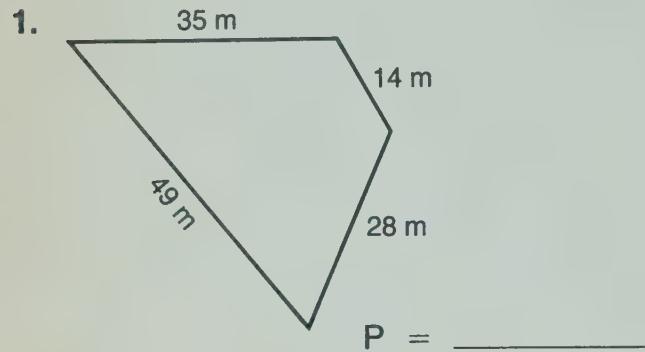
8. Fiona swam 50 m of backstroke. Then Inga swam 50 m of backstroke. How long did this take?

9. Inga swam 50 m of each stroke. How long did it take?

10. A race consists of 50 m of each stroke for each swimmer. How much faster was the fastest person than the slowest?

Perimeter

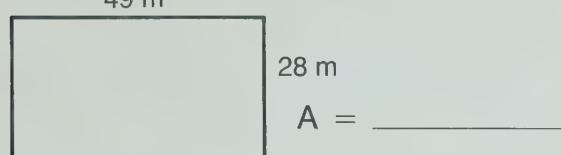
Calculate the perimeter of each shape. Use a ruler to measure the lengths that are not given.



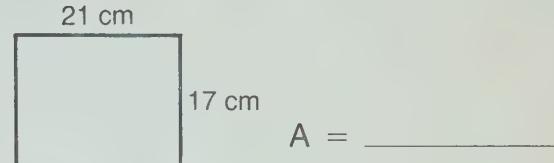
Area

Calculate the area of each shape.

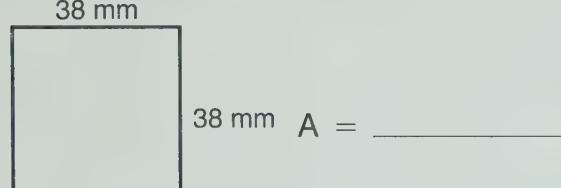
1.



2.



3.



length	width	Area
35 cm	22 cm	
24 m	24 m	
125 m	55 m	
29 cm	29 cm	
76 cm	34 cm	

Solve each problem. Perimeter may be involved.

9. A picture is 24 cm high and 16 cm wide. Find its area.

10. A wall is 240 cm high and 365 cm long. Find its area.

11. Lloyd is putting a fence around a field 62 m long and 38 m wide. How much land will be inside the fence? _____
How much fencing will he need? _____

12. Sumi is framing a picture. It is 42 cm long and 24 cm high. How many centimetres of framing does she need? _____

13. The area of a driveway is 75 m^2 . It is 15 m long. How wide is it?

14. Carina is putting wallpaper on a wall. The wall is 240 cm high and 412 cm long. How much wall will be covered with paper? _____

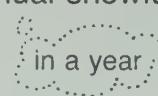
15. Lance is cutting the grass on a lawn. It is 18 m long and 4 m wide. How much lawn is there to cut?

16. The area of a field is 432 m^2 . The field is 18 m wide. How long is it?

How much fencing would be needed to go around it? _____

Average

The total snowfall in Deerland for each year from 1945 to 1950 is given in centimetres. Calculate the average annual snowfall for this time period.



1945	1946	1947	1948	1949	1950
90	74	82	95	85	78

$$\text{C } 90 \boxed{+} 74 \boxed{+} 82 \boxed{+} 95 \boxed{+} 85 \boxed{+} 78 \boxed{=} \boxed{504} \boxed{\div} 6 \boxed{=} \boxed{84}$$

Find the total snowfall.

Divide by the number of years.

The average annual snowfall is 84 cm.

1. The total rainfall for each month in Rainy Lake is given in millimetres. Calculate the average monthly rainfall.

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
141	186	154	201	216	211	193	187	166	142	153	138

2. Giovanna recorded the number of vehicles that passed the corner of Elm Street and 14th Avenue between 8:00 and 8:30 each morning. Calculate the average number of vehicles.

Mon.	Tues.	Wed.	Thurs.	Fri.
151	144	156	152	147

3. The Happy Time Theatre group sold tickets to their shows in advance. Calculate the average number of advance tickets sold for a show.

Jan. 13	Jan. 14	Jan. 15	Jan. 20	Jan. 21	Jan. 22
418	522	526	389	540	527

For one show all seats were sold. Which one was that? _____

Doubling Power

Many problems in fields such as biology and medicine are solved using doubling power.

Consider doubling 2, doubling that result, then doubling the next result, and so on. These numbers are the powers of 2.

2 4 8 16 ...

You can use your calculator to double.

C **2** **×** **=** **=** **=** Keep pressing equal.

What is the largest power of 2
that the display will show? _____

Job 1

Rake leaves
For 16 d (days)
Pay: \$100 each day

Job 2

Rake leaves
For 16 d
Pay: \$2 for 1st day
\$4 for 2nd day
\$8 for 3rd day
and so on, for 16 d

Guess which job pays better.

Then calculate which one pays better.

How much better?

Hint: As you calculate each day's pay for Job 2,
be sure to record it. You need to find the total pay.

Patterns

Calculate only as many products as you need to, to find each pattern. Complete each pattern without using your calculator. Then use the multiplication constant to check. (See page 27.)

1. $3 \times 37\,037 =$ _____

$6 \times 37\,037 =$ _____

$9 \times 37\,037 =$ _____

$12 \times 37\,037 =$ _____

$15 \times 37\,037 =$ _____

$18 \times 37\,037 =$ _____

$21 \times 37\,037 =$ _____

$24 \times 37\,037 =$ _____

$27 \times 37\,037 =$ _____

2. $3 \times 3367 =$ _____

$6 \times 3367 =$ _____

$9 \times 3367 =$ _____

$12 \times 3367 =$ _____

$15 \times 3367 =$ _____

$18 \times 3367 =$ _____

$21 \times 3367 =$ _____

$24 \times 3367 =$ _____

$27 \times 3367 =$ _____

3. $5 \times 5 =$ _____

$55 \times 5 =$ _____

$555 \times 5 =$ _____

$5\,555 \times 5 =$ _____

$55\,555 \times 5 =$ _____

$555\,555 \times 5 =$ _____

$5\,555\,555 \times 5 =$ _____

4. $88 \times 8 =$ _____

$888 \times 8 =$ _____

$8\,888 \times 8 =$ _____

$88\,888 \times 8 =$ _____

$888\,888 \times 8 =$ _____

$8\,888\,888 \times 8 =$ _____

5. $1 \times 99\,999 =$ _____

$2 \times 99\,999 =$ _____

$3 \times 99\,999 =$ _____

$4 \times 99\,999 =$ _____

$5 \times 99\,999 =$ _____

$6 \times 99\,999 =$ _____

$7 \times 99\,999 =$ _____

$8 \times 99\,999 =$ _____

$9 \times 99\,999 =$ _____

6. $1 \times 9109 =$ _____

$2 \times 9109 =$ _____

$3 \times 9109 =$ _____

$4 \times 9109 =$ _____

$5 \times 9109 =$ _____

$6 \times 9109 =$ _____

$7 \times 9109 =$ _____

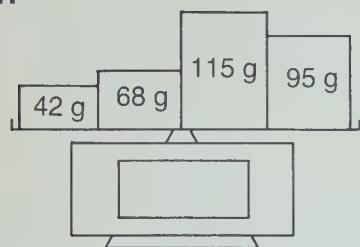
$8 \times 9109 =$ _____

$9 \times 9109 =$ _____

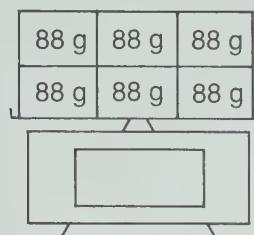
Mass

Calculate the total mass on each scale.

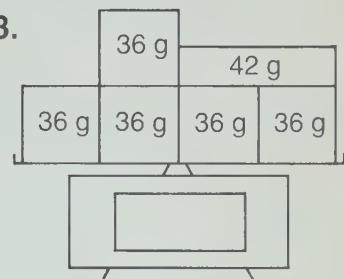
1.



2.

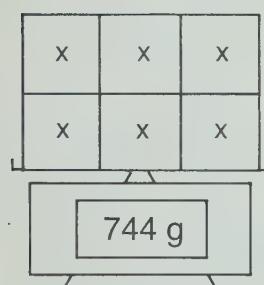


3.

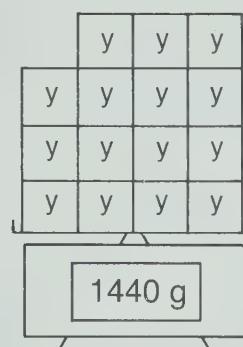


Calculate the mass of one box.

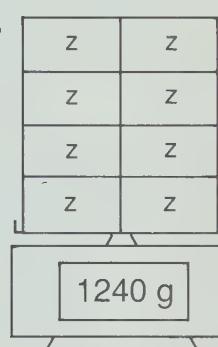
4.



5.

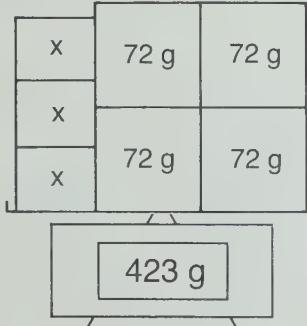


6.

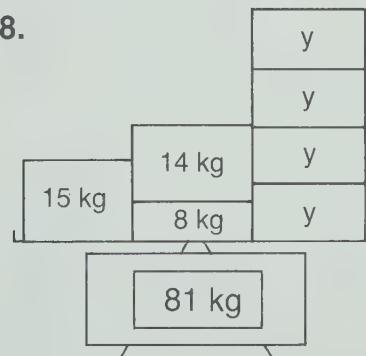


Calculate the mass of one unmeasured box.

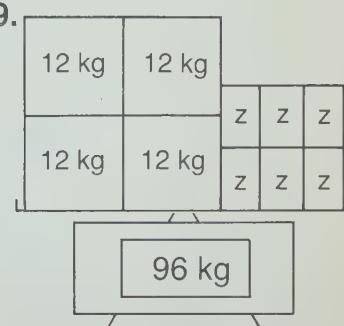
7.



8.



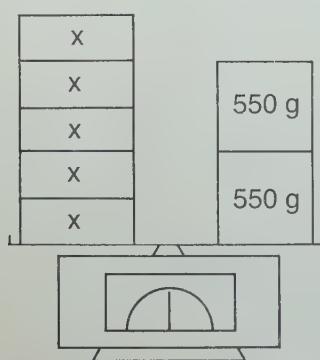
9.



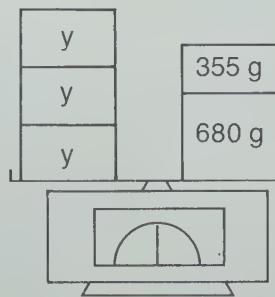
The scales are balanced.

Calculate the mass of one unmeasured box.

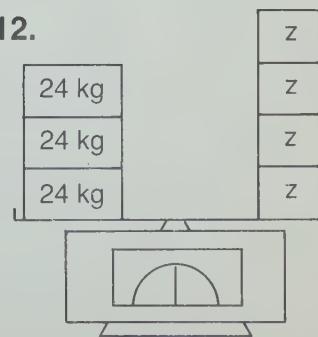
10.



11.

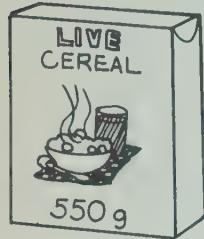


12.



Comparison Shopping

Many people compare prices when grocery shopping.
The unit price tells them which costs the least.



Calculate the unit price.

$$\boxed{C} \ 235 \ \boxed{\div} \ 550 \ \boxed{=} \ 0.4272727 \text{ or } 0.43$$

cost
in cents

number
of units
(grams)

rounded
to nearest
hundredth

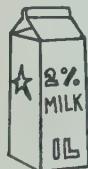
\$2.35

The unit price is 0.43¢/g.

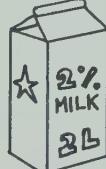
43 hundredths of one cent

Calculate the unit price of each item.
Circle the item that costs the least.

1.



95¢



\$1.84

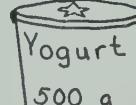


\$2.69

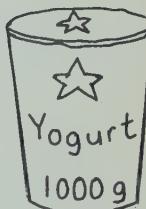
2.



75¢

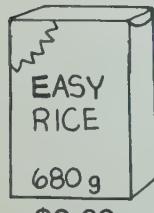


\$1.69



\$2.79

3.

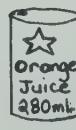


\$2.69



\$2.85

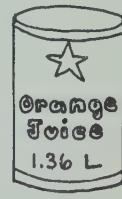
4.



59¢



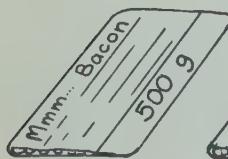
\$1.59



\$1.99

1.36 L
= 1360 mL

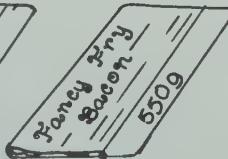
5.



\$3.25



\$2.99



\$3.69

6. Which usually costs less, the large size or the small size?

7. Give some reasons why the largest might not be the best buy.

8. When considering different brands, what should you think of?

Fractions as Decimals

Recall

$$\frac{3}{4} = \frac{75}{100}$$

$\times 25$

$\times 25$

$$\frac{3}{4} = 0.75$$

Try C 3 ÷ 4 = _____ $\frac{3}{4}$ also means $3 \div 4$.

Express each fraction as a decimal.

1. $\frac{1}{8} =$ _____

2. $\frac{4}{5} =$ _____

3. $\frac{3}{8} =$ _____

4. $\frac{2}{3} =$ _____

5. $\frac{3}{5} =$ _____

6. $\frac{1}{6} =$ _____

Express each fraction as a decimal. Then complete each statement with $>$ or $<$.

7. $\frac{1}{4} =$ _____

8. $\frac{5}{8} =$ _____

9. $\frac{7}{8} =$ _____

$\frac{3}{8} =$ _____

$\frac{1}{2} =$ _____

$\frac{5}{6} =$ _____

$\frac{1}{4} \quad \frac{3}{8}$

$\frac{5}{8} \quad \frac{1}{2}$

$\frac{7}{8} \quad \frac{5}{6}$

10. $\frac{13}{4} =$ _____

11. $\frac{12}{8} =$ _____

12. $\frac{1}{3} =$ _____

$\frac{16}{5} =$ _____

$\frac{16}{10} =$ _____

$\frac{3}{8} =$ _____

$\frac{13}{4} \quad \frac{16}{5}$

$\frac{12}{8} \quad \frac{16}{10}$

$\frac{1}{3} \quad \frac{3}{8}$

13. $\frac{15}{4} =$ _____

14. $\frac{2}{5} =$ _____

15. $\frac{4}{5} =$ _____

$\frac{11}{3} =$ _____

$\frac{3}{8} =$ _____

$\frac{7}{8} =$ _____

$\frac{15}{4} \quad \frac{11}{3}$

$\frac{2}{5} \quad \frac{3}{8}$

$\frac{4}{5} \quad \frac{7}{8}$

Adding and Subtracting Large Numbers

Calculate the total area of the four largest oceans.

Pacific	196 140 270 km ²
Atlantic	96 716 450 km ²
Indian	82 216 450 km ²
Arctic	14 806 530 km ²

The calculator cannot display 196 140 270. It can only display 8 digits.

It is necessary to calculate the sum in two parts.

$$\begin{array}{r}
 196 \, | \, 140 \, 270 \\
 96 \, | \, 716 \, 450 \\
 82 \, | \, 216 \, 450 \\
 + \, 14 \, | \, 806 \, 530 \\
 \hline
 1 \, | \, 879 \, 700 \\
 389 \\
 \hline
 389 \, 879 \, 700
 \end{array}$$

Separate the millions.

Calculate the sum of the numbers without the millions.

Calculate the sum of the millions. Include the million carried from the last sum.

Combine.

Calculate each sum.

1. $972\,836\,451$

$$\begin{array}{r}
 972 \, 836 \, 451 \\
 328 \, 112 \, 019 \\
 476 \, 283 \, 075 \\
 + \, 991 \, 425 \, 867 \\
 \hline
 \end{array}$$

2. $111\,222\,333$

$$\begin{array}{r}
 111 \, 222 \, 333 \\
 444 \, 555 \, 666 \\
 777 \, 888 \, 999 \\
 999 \, 888 \, 777 \\
 666 \, 555 \, 444 \\
 + \, 333 \, 222 \, 111 \\
 \hline
 \end{array}$$

3. $105\,394\,672$

$$\begin{array}{r}
 105 \, 394 \, 672 \\
 28 \, 476 \, 925 \\
 514 \, 382 \, 917 \\
 442 \, 805 \, 947 \\
 + \, 613 \, 267 \, 388 \\
 \hline
 \end{array}$$

4. $416\,489\,498$

$$\begin{array}{r}
 416 \, 489 \, 498 \\
 613 \, 283 \, 174 \\
 99 \, 253 \, 417 \\
 442 \, 283 \, 669 \\
 + \, 85 \, 174 \, 920 \\
 \hline
 \end{array}$$

5. $130\,079\,641$

$$\begin{array}{r}
 130 \, 079 \, 641 \\
 25 \, 873 \, 256 \\
 369 \, 875 \, 431 \\
 95 \, 984 \, 370 \\
 + \, 140 \, 390 \, 285 \\
 \hline
 \end{array}$$

6. $115\,249\,650$

$$\begin{array}{r}
 115 \, 249 \, 650 \\
 70 \, 504 \, 955 \\
 38 \, 397 \, 645 \\
 + \, 844 \, 132 \, 682 \\
 \hline
 \end{array}$$

Now try calculating the difference.

7. $3\,864\,927\,650$

$$\begin{array}{r}
 3 \, 864 \, 927 \, 650 \\
 - \, 1 \, 756 \, 099 \, 897 \\
 \hline
 \end{array}$$

8. $7\,025\,943\,047$

$$\begin{array}{r}
 7 \, 025 \, 943 \, 047 \\
 - \, 3 \, 948 \, 039 \, 528 \\
 \hline
 \end{array}$$

9. $14\,045\,799\,625$

$$\begin{array}{r}
 14 \, 045 \, 799 \, 625 \\
 - \, 8 \, 341 \, 819 \, 956 \\
 \hline
 \end{array}$$

Timely Math

Suppose your heart beats 78 times in 1 min.
How many times does it beat in 1 h (hour)?
in 1 d (day)? in 1 week? in 1 a (year)?
Complete the program to find out.

$$\begin{array}{ccccccccc} & & 4860. & & & & & & \\ \text{C} \quad 78 & \times & 60 & \times & 24 & \times & \text{_____} & \times & \text{_____} \\ \text{minutes} & & \text{hours} & & \text{days} & & \text{weeks} & & \\ \text{in an} & & \text{in a} & & \text{in a} & & \text{in a} & & \\ \text{hour} & & \text{day} & & \text{week} & & \text{year} & & \\ \\ \text{1 h} & & 4860 \text{ times} & & & & & & \\ \text{1 d} & & & & & & & & \\ \text{1 week} & & & & & & & & \\ \text{1 a} & & & & & & & & \end{array}$$

Develop a strategy to solve each problem.
Then calculate the answer.

1. Give your age in years, weeks, days, hours, minutes, and seconds.

2. Choose a book you like. Count the words on one page. Find the approximate number of words in the book.

3. A one-dollar bill is about as thick as a sheet of paper. How thick would 1 000 000 one-dollar bills be?

4. Imagine a stack of dimes 1 km high. How many dollars would it be worth?

Estimating Quotients

When dividing with your calculator, it is important to know if your results are reasonable.

You can estimate to find out if your results are reasonable.

Round to numbers that are easy to divide mentally.

Estimate each result. The first exercise is done for you.

It shows you the thinking steps.

1. $3654 \div 87$

3600 \div 90 = 40

Round 87 to the nearest 10. 90

Round 3612 to the nearest hundred or thousand that can

be divided evenly by 90. 3600

3600 \div 90 = 40

2. $1365 \div 21$

1400 \div 20 = 70

3. $3901 \div 47$

4000 \div 50 = 80

4. $13545 \div 63$

12600 \div 60 = 210

5. $15232 \div 28$

14400 \div 30 = 480

6. $18462 \div 51$

18000 \div 50 = 360

7. $33108 \div 62$

32400 \div 60 = 540

8. $70728 \div 84$

72000 \div 80 = 900

9. $109053 \div 189$

110000 \div 200 = 550

10. $144225 \div 225$

140000 \div 200 = 700

11. $262080 \div 832$

260000 \div 800 = 325

Now use your calculator to find each quotient.
Are the results close to your estimates?

The Division Constant

Enter each program. Above each $=$ print what the display shows. Explain what your calculator is doing.

1. $\boxed{C} \boxed{2} \boxed{4} \div \boxed{8} = \boxed{3} \boxed{2} = \boxed{7} \boxed{2} = \boxed{1} \boxed{6} =$

2. $\boxed{C} \boxed{3} \boxed{6} \div \boxed{6} = \boxed{4} \boxed{8} = \boxed{1} \boxed{2} = \boxed{5} \boxed{4} =$

Complete each table. Use the division constant.

Round each answer to the nearest tenth.

3. $\div 46$

1 937	
28 215	
61 193	
47 035	

4. $\div 53$

7 250	
18 693	
84 925	
63 455	

5. $\div 87$

66 450	
93 215	
74 146	
83 724	

6. $\div 251$

64 249	
125 830	
265 477	
490 652	

7. $\div 493$

183 240	
372 193	
648 791	
497 600	

8. $\div 782$

238 641	
497 416	
613 287	
905 384	

Office supplies for one year included these items.

Find the quantity available for one week of the year.

Round each to the nearest tenth.

9. 115 packages of letterhead paper _____
10. 825 packages of typing paper _____
11. 1640 packages of photocopy paper _____
12. 780 packages of ballpoint pens _____
13. 95 packages of typewriter ribbons _____
14. 466 packages of letter envelopes _____
15. 235 packages of envelopes #654 _____
16. 164 packages of envelopes #659 _____

Remainders

500 desks were delivered to a new school. Each of 14 classrooms were to receive the same number of desks. How many did each classroom receive? How many were left?

$$\text{C } 500 \div 14 = 35.714285$$

Each classroom received 35 desks.

But how many were left?

$$\text{C } 35 \times 14 = 490$$

whole number
part of quotient

divisor

$$\text{C } 500 - 490 = 10$$

dividend

product

Sometimes this step is easy
enough to do mentally.
This one was!

There were 10 desks left.

Think about why this method works. Then divide.

Show each result like this: $500 \div 14 = 35 \text{ R}10$.

1. $73 \div 17$ _____ 2. $87 \div 24$ _____ 3. $93 \div 29$ _____

4. $139 \div 16$ _____ 5. $173 \div 35$ _____ 6. $872 \div 41$ _____

7. $1732 \div 83$ _____ 8. $38\,428 \div 67$ _____ 9. $43\,034 \div 88$ _____

10. $7410 \div 184$ _____ 11. $87\,563 \div 213$ _____

12. $279\,366 \div 678$ _____ 13. $433\,196 \div 215$ _____

14. $105\,936 \div 412$ _____ 15. $795\,000 \div 384$ _____

Multiplying Large Numbers

Wonderful World Park had 7 451 329 visitors last year. Each visitor spent an average of \$23 in the the park. How much was spent by all the visitors?

The product of 7 451 329 and 23 cannot be shown in the display. It is more than 8 digits. It is necessary to find the product in parts.

$$\begin{array}{r}
 7 \ 4 \boxed{5} \ 1 \ 3 \ 2 \ 9 \\
 \times \ 2 \ 3 \\
 \hline
 1 \ 1 \ 8 \ 0 \ 5 \ 6 \ 7 \\
 1 \ 7 \ 0 \ 2 \ 0 \ 0 \ 0 \ 0 \ 0 \\
 \hline
 1 \ 7 \ 1 \ 3 \ 8 \ 0 \ 5 \ 6 \ 7
 \end{array}
 \begin{array}{l}
 \text{Separate the large number into two parts.} \\
 \text{Multiply each part by 23.} \\
 \text{Put in zeros as place holders.} \\
 \text{Then add mentally.}
 \end{array}$$

The visitors spent \$171 380 567.

Calculate each product.

1. $1 \ 2 \ 4 \ 6 \ 7 \ 8 \ 9 \ 1$
 $\times \ 7 \ 8$

2. $4 \ 3 \ 2 \ 1 \ 8 \ 3 \ 0 \ 6$
 $\times \ 5 \ 7$

3. $1 \ 3 \ 1 \ 4 \ 2 \ 8 \ 6 \ 8 \ 5$
 $\times \ 3 \ 4$

4. $9 \ 7 \ 0 \ 2 \ 3 \ 4 \ 6 \ 1$
 $\times \ 7 \ 2$

5. $2 \ 7 \ 3 \ 1 \ 0 \ 2 \ 9 \ 6$
 $\times \ 5 \ 8$

6. $6 \ 3 \ 4 \ 1 \ 2 \ 5 \ 0 \ 5$
 $\times \ 4 \ 1$

7. A newspaper uses 5 643 920 sheets of newsprint each week. How many sheets are used in a year?

Fuel Consumption

Gasoline consumption of cars is given in litres per hundred kilometres (L/100 km).

Mike started a trip with a full tank of gasoline. He travelled 498 km. He refilled the tank with 44 L of gasoline. Calculate the fuel consumption.

$$\text{Fuel Consumption} = \text{fuel (L)} \div \text{distance (km)} \times 100$$

$$[C] \ 44 \ \div \ 498 \ \times \ 100 \ \equiv \ 8.83534$$

Round to the nearest tenth.

The fuel consumption was 8.8 km/100 L.

Calculate the fuel consumption. Round to the nearest tenth.

1. Mr. Fonovic drove 275 km and used 36.5 L of gasoline.
2. Mrs. Paolucci used 34.2 L of fuel to drive 315 km.
3. Miss Steeles' odometer read 12 884 km when she started a trip. It read 13 489 km when she finished. She used 42.7 L of gasoline.
4. René started a trip with a full tank of fuel. He travelled 482 km before he refuelled. He needed 53.6 L of gasoline.
5. Zoe filled her fuel tank. One day she drove 175 km. The next day she drove 89 km. The third day she drove 101 km before refuelling. She needed 43.5 L of gasoline.
6. Bernie's odometer read 25 394 km when he filled his fuel tank. It read 26 006 km when he refuelled. He needed 48.9 L of gasoline.

List some factors that affect fuel consumption.

Patterns

Calculate only as many products or quotients as you need to, to find each pattern. Complete each pattern without using your calculator. Then use the multiplication or division constant to check. (See pages 27 and 45.)

1. $7 \times 15\ 873 =$ _____

$14 \times 15\ 873 =$ _____

$21 \times 15\ 873 =$ _____

$28 \times 15\ 873 =$ _____

$35 \times 15\ 873 =$ _____

$42 \times 15\ 873 =$ _____

$49 \times 15\ 873 =$ _____

$56 \times 15\ 873 =$ _____

$63 \times 15\ 873 =$ _____

2. $11\ 111 \times 9 =$ _____

$22\ 222 \times 9 =$ _____

$33\ 333 \times 9 =$ _____

$44\ 444 \times 9 =$ _____

$55\ 555 \times 9 =$ _____

$66\ 666 \times 9 =$ _____

$77\ 777 \times 9 =$ _____

$88\ 888 \times 9 =$ _____

$99\ 999 \times 9 =$ _____

3. $111 \div 37 =$ _____

$222 \div 37 =$ _____

$333 \div 37 =$ _____

$444 \div 37 =$ _____

$555 \div 37 =$ _____

$666 \div 37 =$ _____

$777 \div 37 =$ _____

$888 \div 37 =$ _____

$999 \div 37 =$ _____

4. $1 \div 9 =$ _____

$2 \div 9 =$ _____

$3 \div 9 =$ _____

$4 \div 9 =$ _____

$5 \div 9 =$ _____

$6 \div 9 =$ _____

$7 \div 9 =$ _____

$8 \div 9 =$ _____

5. $1 \div 11 =$ _____

$2 \div 11 =$ _____

$3 \div 11 =$ _____

$4 \div 11 =$ _____

$5 \div 11 =$ _____

$6 \div 11 =$ _____

$7 \div 11 =$ _____

$8 \div 11 =$ _____

$9 \div 11 =$ _____

6. $1 \div 99 =$ _____

$2 \div 99 =$ _____

$3 \div 99 =$ _____

$4 \div 99 =$ _____

$5 \div 99 =$ _____

$6 \div 99 =$ _____

$7 \div 99 =$ _____

$8 \div 99 =$ _____

$9 \div 99 =$ _____

Know Your Decimals

12.964

3.25

9.654

0.1

7.26

7.249

9.055

15.8794

2.947

7.1989

1. C Add the decimals that are four-place decimals. _____
2. C Subtract the least number from the greatest. _____
3. C Add the decimals that have 5 in the hundredths place. _____
4. C Subtract the decimal closest to 3 from the decimal closest to 9. _____
5. C Add the decimals between 3 and 10. _____
6. C Add the decimals that when rounded to the nearest tenth are 7.2. _____
7. C Subtract the greatest decimal in the first row from the greatest decimal in the second row. _____
8. C Add the decimals that have 9 in the thousandths place. _____
9. C Add the decimals that when rounded to the nearest one are 7. _____
10. C Subtract the decimal closest to 7 from the decimal closest to 9. _____
11. C Add the decimals that are to the hundredths place. _____
12. C Subtract the decimal that when rounded to the nearest tenth is 9.1 from the decimal closest to 13. _____

Camping Math

BLUE WATER PARK

150 trailer sites,
with electrical hook-up - \$9.50 each day

225 tent sites - \$6.25 each day

Canoe rentals: \$2.50 each hour
\$15 maximum charge for a day

Flush toilets Hot showers

Open May 15 to October 15
Maximum stay: 1 week

1. All the trailer sites are taken. How much is this income for one day?

2. 209 tent sites are taken. How much is this income for one day?

3. You rent a canoe from 10:30 A.M. to 3:30 P.M. How much do you pay?

4. 85 trailer sites are taken and 192 tent sites are taken. How much is this income for one day?

5. You rent a trailer site for four days. How much do you pay?

6. You rent a tent site for one week. How much do you pay?

7. You rent a canoe from 9 A.M. to 5 P.M. How much do you pay?

8. The camp is full. How much is the income from the sites for one day?

Patterns

Calculate each product in the first row. Study the pattern. Find each product in the second row without calculating. Check using your calculator.

1. A. $49 \times 51 =$ _____ B. $31 \times 29 =$ _____ C. $79 \times 81 =$ _____

D. $19 \times 21 =$ _____ E. $61 \times 59 =$ _____ F. $91 \times 89 =$ _____

2. A. $73 \times 67 =$ _____ B. $17 \times 23 =$ _____ C. $47 \times 53 =$ _____

D. $27 \times 33 =$ _____ E. $83 \times 77 =$ _____ F. $63 \times 57 =$ _____

3. A. $45 \times 55 =$ _____ B. $15 \times 25 =$ _____ C. $75 \times 65 =$ _____

D. $35 \times 45 =$ _____ E. $95 \times 85 =$ _____ F. $35 \times 25 =$ _____

4. A.

×	16	45	24	99	75	37
201						

B.

×	22	49	62	89	73	48
201						

5. A.

×	33	333	3333	33333	66
37					

B.

×	666	6666	99	999	9999
37					

Circles

The **circumference** and the **diameter** of four objects have been measured. Each measurement is given to the nearest tenth of a centimetre. Complete the chart.

Object	Circumference C	diameter d	$C \div d$
wastepaper container	77.0 cm	24.5 cm	
kettle base	63.5 cm	20.2 cm	
juice can	33.2 cm	10.6 cm	
bowl	56.6 cm	18.0 cm	

$C \div d$ is an important value.

It is represented by π (read pi).

π is approximately 3.14.

Did you find $C \div d$ to be close to 3.14? _____

If you know either the diameter or the circumference of a circle, you can find the other measure.

Since $\pi = \frac{C}{d}$, then $C = \pi \times d$
and $d = C \div \pi$.

Solve each problem. Round answers to the nearest hundredth.

1. The diameter of a basketball hoop is 46 cm. Find the circumference.

2. The circumference of a mirror is 72 cm. Find the diameter.

3. The circumference of a clock face is 96 cm. Find the diameter.

4. The diameter of a watch face is 2.2 cm. Find the circumference.

5. The diameter of a round table top is 98 cm. Find the circumference.

6. The circumference of a dinner plate is 82 cm. Find the diameter.

Powers

3^4 is the fourth **power** of 3.

3^4 means $3 \times 3 \times 3 \times 3$.

4 is the **exponent**.

An exponent shows how many times a number is used as a factor.

Enter this program. Above each $=$ print what the display shows.

4

C 2 \times $=$ $=$ $=$ $=$

2, 4, 8, 16, 32 are the first five powers of 2.

Use this program to find the first six powers of each number.

2 _____

3 _____

4 _____

5 _____

6 _____

7 _____

8 _____

9 _____

Calculate each power.

1. 10^5 = _____ 2. 25^4 = _____ 3. 3^7 = _____

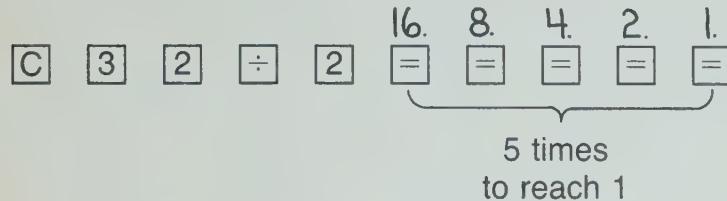
4. 35^3 = _____ 5. 13^6 = _____ 6. 7^8 = _____

7. 2^{12} = _____ 8. 3^{10} = _____ 9. 1^9 = _____

Expressing Numbers as Powers

Recall $32 = 2^5$.

We can express some numbers as powers.



We used the division constant to divide 32 by 2 five times. $32 = 2^5$

Complete each statement.

1. $81 = 3^{\underline{\hspace{2cm}}}$
2. 2401 is the _____ power of 7.
3. $262\,144 = 8^{\underline{\hspace{2cm}}}$
4. 3125 is the _____ power of 5.
5. $3375 = 15^{\underline{\hspace{2cm}}}$
6. 2048 is $2 \times \underline{\hspace{2cm}}$.
7. $531\,441 = 3^{\underline{\hspace{2cm}}}$
8. 16 384 is $4 \times \underline{\hspace{2cm}}$.
9. $46\,656 = 6^{\underline{\hspace{2cm}}}$
10. 2 097 152 is the _____ power of 8.
11. $59\,049 = 9^{\underline{\hspace{2cm}}}$
12. 161 051 is $11 \times \underline{\hspace{2cm}}$.
13. $248\,832 = 12^{\underline{\hspace{2cm}}}$
14. 9 765 625 is the _____ power of 5.
15. $524\,288 = 2^{\underline{\hspace{2cm}}}$
16. 16 807 is $7 \times \underline{\hspace{2cm}}$.
17. $117\,649 = 7^{\underline{\hspace{2cm}}}$
18. 15 625 is the _____ power of 5.
19. $262\,144 = 4^{\underline{\hspace{2cm}}}$
20. 6561 is $3 \times \underline{\hspace{2cm}}$.
21. $1296 = 6^{\underline{\hspace{2cm}}}$
22. 35 831 808 is the _____ power of 12.
23. $43\,046\,721 = 9^{\underline{\hspace{2cm}}}$
24. 262 144 is the _____ power of 8.

Percent

55% of the 840 students at Bright Day School are girls. How many girls are there?

$$\begin{array}{l} 55\% \text{ of } 840 \\ = \frac{55}{100} \times 840 \\ = 462 \end{array} \quad \text{or} \quad \boxed{C} \ 55 \ \boxed{\times} \ 840 \ \boxed{\%} \ \underline{462}$$

The $\boxed{\%}$ key saves the steps of dividing by 100 and pressing $\boxed{=}$.

There are 462 girls at Bright Day School.

Use the $\boxed{\%}$ key to solve each problem.

1. Partly skimmed milk is 2% butterfat. In 3 L of partly-skimmed milk, how much butterfat is there?

2. A football stadium holds 15 400 people. At one game 85% of the seats were taken. How many people were there?

3. Mani answered 75% of the 40 questions on a test correctly. How many did he answer correctly?

4. 40% of a grass seed mixture is alfalfa. In 25 kg of grass seed, how many kilograms of alfalfa are there?

5. About 85% of the nuts in a can of mixed nuts are peanuts. How many peanuts would you expect in 200 nuts?

6. The junior hockey team lost 30% of the games they played. How many of the next 10 games would you expect them to win?

Order of Operations

Program $8 + 75 \div 15$ in two ways.

Do each calculation. Then print the results.

1. **C** **8** **+** **7** **5** **÷** **1** **5** **=** _____

2. **C** **7** **5** **÷** **1** **5** **+** **8** **=** _____

Are your results the same? _____

Mathematicians want one result to be the correct one.

They agree to follow this order of operations.

First, do \times and \div in order from left to right.

Then do $+$ and $-$ in order from left to right.

Which program followed these rules? _____

Program each expression by following the agreed-upon order.

3. $19 \times 8 + 3$ **□** **□** **□** **□** **□** **□** **□** _____

4. $56 \div 7 + 9$ **□** **□** **□** **□** **□** **□** **□** _____

5. $18 + 72 \div 6$ **□** **□** **□** **□** **□** **□** **□** _____

6. $108 \div 12 - 5$ **□** **□** **□** **□** **□** **□** **□** **□** _____

7. $13 + 14 \times 7$ **□** **□** **□** **□** **□** **□** **□** **□** _____

8. $24 \times 6 \div 12$ **□** **□** **□** **□** **□** **□** **□** **□** _____

9. $84 \div 7 \times 25$ **□** **□** **□** **□** **□** **□** **□** **□** _____

10. $34 + 19 \times 11$ **□** **□** **□** **□** **□** **□** **□** **□** _____

First Things First

There is another rule about the order of operations that mathematicians agree upon.

Operations within parentheses come first.

Program $(90 \div 30) + 15$ and $90 \div (30 + 15)$.

Do each calculation. Then print the result.

1. $(90 \div 30) + 15$

C 9 0 \div 3 0 + 1 5 _____

2. $90 \div (30 + 15)$

STEP 1 C 3 0 + 1 5 = _____

STEP 2 C 9 0 \div = _____

Enter STEP 1
result here.

The parentheses make these two different but correct calculations.

Write the three steps for order of operations that you now know.

Program each expression.

3. $64 + 16 \div 8$ _____

4. $(64 + 16) \div 8$ _____

5. $(36 + 40) \times 7$ _____

6. $36 + 40 \times 7$ _____

7. $84 \div 7 + 5$ _____

8. $84 \div (7 + 5)$ C _____

Two-Step Calculations

We have seen that some expressions require two steps using your calculator. Show the two steps required for each.

Program each expression. There is only one exercise that does not have two steps.

$$1. \quad 144 \div (17 + 31)$$

A horizontal row of 15 empty square boxes, intended for children to draw or write in. The boxes are evenly spaced and aligned horizontally.

$$2. 137 - (13 \times 8)$$

A horizontal row of fifteen empty square boxes, intended for children to draw a picture in each box.

$$3. 291 - (97 + 78)$$

A horizontal row of 15 empty square boxes, each with a thin black border, intended for children to draw or color in.

$$4. \ 624 \div (13 \times 6)$$

A horizontal row of fifteen empty square boxes, each with a thin black border, intended for children to draw or color in.

$$5. \quad 272 \div (97 - 89)$$

A horizontal row of 15 empty square boxes, each with a thin black border, intended for children to draw or color in.

$$6. 115 + (16 \times 9)$$

A horizontal row of 15 empty square boxes, each with a thin black border, intended for children to draw or color in.

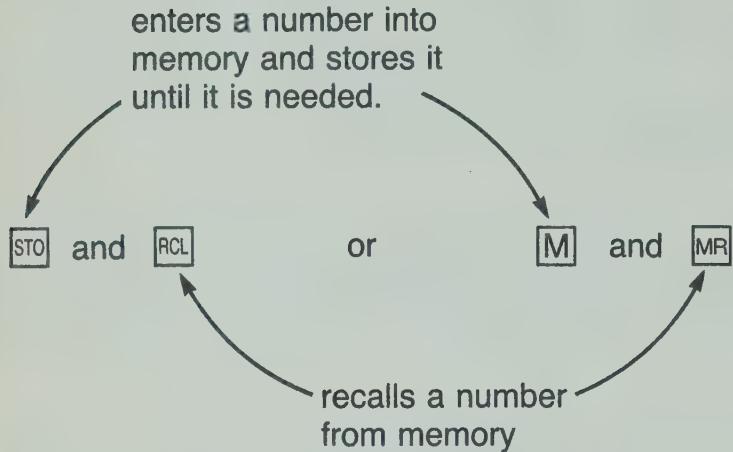
$$7. 187 - (23 \times 7)$$

A horizontal row of 15 empty square boxes, each with a thin black border, intended for children to draw or color in.

Calculator Memory I

Some calculators have a memory. This allows you to do two-step exercises in one step.

If your calculator has two keys for the memory, they are probably these.



Here is the last exercise from page 59.
This time it is done in one step using memory.
 $187 - (23 \times 7)$

C 2 3 × 7 = STO 1 8 7 - RCL = _____
or M or MR

Program exercises 1 to 5 from page 59 in one step using memory.

1. _____
2. _____
3. _____
4. _____
5. _____

Calculator Memory II

If your calculator has more than two keys for memory, they are probably these.

M+

M-

MR or RM

MC or CM

adds a number
to memory

subtracts a number
from memory

recalls a number from memory

clears
memory

If you have these keys, you must use **[MC]** between calculations instead of **[C]**.

Try these exercises using this kind of memory.

$$1. 195 - (17 \times 6)$$

MC 1 7 X 6 = M+ 1 9 5 - MR =

$$2. (16 \times 12) - (19 \times 8)$$

MC 1 9 X 8 = M+ 1 6 X 1 2 = - MR =

$$3. \quad 198 \div (14 + 52)$$

MC 1 4 + 5 2 = M+ 1 9 8 ÷ MR =

$$4. (17 \times 11) + (5 \times 18)$$

MC 1 7 X □ □ □ M+ □ □ □ □ □ □ □ □ □ □

$$5. (18 + 42) \times (13 + 29)$$

$$6. (16 \times 23) - (99 \div 33)$$

Now try each program leaving out all except the one at the end.

Quick Memory

3 movie tickets at \$5.25 each.
2 large drinks at \$0.95 each.
1 medium drink at \$0.65 each.
1 large popcorn at \$1.25 each.
2 medium popcorn at \$0.89 each.

How much did this visit to the movies cost.?

With $\boxed{M+}$ this calculation is quick.

\boxed{MC} $\boxed{3}$ $\boxed{\times}$ $\boxed{5}$ $\boxed{\cdot}$ $\boxed{2}$ $\boxed{5}$ $\boxed{M+}$ $\boxed{2}$ $\boxed{\times}$ $\boxed{\cdot}$ $\boxed{9}$ $\boxed{5}$ $\boxed{M+}$
 $\boxed{\cdot}$ $\boxed{6}$ $\boxed{5}$ $\boxed{M+}$ $\boxed{1}$ $\boxed{\cdot}$ $\boxed{2}$ $\boxed{5}$ $\boxed{M+}$ $\boxed{2}$ $\boxed{\times}$ $\boxed{\cdot}$ $\boxed{8}$ $\boxed{9}$ $\boxed{M+}$ \boxed{MR} 21.33

The cost was \$21.33.

\boxed{MR} recalls the sum that has been added to memory. Do not use $\boxed{=}$.

Program a solution to each problem.

1. 7 submarine sandwiches at \$1.95 each.
2 soft drinks at \$0.55 each.
2 milkshakes at \$1.35 each.
How much did this cost?

2. 2 pizzas at \$6.30 each.
3 steak sandwiches at \$2.19 each.
3 cheeseburgers at \$1.75 each.
6 soft drinks at \$0.65 each.
How much did this cost?

3. 4 passes to the park at \$8.50 each.
10 bingo tickets at \$0.50 each.
6 souvenirs at \$2.99 each.
How much did this cost?

4. 5 tickets to the fair at \$1.75 each.
12 rides at \$2.25 each.
8 rides at \$1.50 each.
4 souvenirs at \$1.45 each.
How much did this cost?

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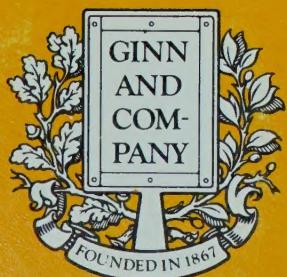
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